

WHAT IS CLAIMED IS:

1. A method for microscopy comprising the steps of:
 - generating pulsed illuminating light that comprises wavelengths which lie in a spectral region;
 - defining a detection spectral region that lies within the spectral region;
 - influencing the light components of the illuminating light that comprise wavelengths within the detection spectral region;
 - illuminating a specimen with the illuminating light; and
 - detecting the detection light proceeding from the specimen within the detection spectral region.
2. The method as defined in Claim 1, wherein the influencing includes a removal of the light components of the illuminating light that comprise wavelengths within the detection spectral region.
3. The method as defined in Claim 1, wherein the influencing contains a modification of the polarization state of the light components of the illuminating light that comprise wavelengths within the detection spectral region.
4. The method as defined in Claim 3, wherein the modification of the polarization state encompasses a rotation of a linear polarization.
5. The method as defined in Claim 1, wherein the influencing encompasses a spectral filtration.
6. The method as defined in Claim 1, wherein the wavelength of the illuminating light lies outside the detection spectral region.

7. The method as defined in Claim 1, wherein a pulsed laser is provided for generating the pulsed illuminating light.
8. A microscope having a light source for generating pulsed illuminating light that comprises light from a spectral region, and having at least one detector for detecting the detection light proceeding from a specimen in a detection spectral region, wherein the detection spectral region lies within the spectral region; and the illuminating light contains no light from the detection spectral region having the same polarization properties.
9. The microscope as defined in Claim 8, wherein the illuminating light contains no light from the detection spectral region.
10. The microscope as defined in Claim 8, further comprising a spectral filter that modifies the polarization state of the light components of the illuminating light that comprise wavelengths within the detection spectral region.
11. The microscope as defined in Claim 8, further comprising a spectral filter that removes from the illuminating light the light components of the illuminating light that comprise wavelengths within the detection spectral region.
12. The microscope as defined in Claim 11, further comprising a further spectral filter that allows only light of the wavelengths of the detection spectral region to arrive at the detector.
13. The microscope as defined in Claim 12, wherein the further spectral filter is inverse with respect to the spectral filter.

14. A confocal scanning microscope having a light source for generating pulsed illuminating light that comprises light from a spectral region, and having at least one detector for detecting the detection light proceeding from a specimen in a detection spectral region, wherein the detection spectral region lies within the spectral region; and the illuminating light contains no light from the detection spectral region having the same polarization properties.
15. The confocal scanning microscope as defined in Claim 14, wherein the illuminating light contains no light from the detection spectral region.
16. The confocal scanning microscope as defined in Claim 14, further comprising a spectral filter that modifies the polarization state of the light components of the illuminating light that comprise wavelengths within the detection spectral region.
17. The confocal scanning microscope as defined in Claim 14, further comprising a spectral filter that removes from the illuminating light the light components of the illuminating light that comprise wavelengths within the detection spectral region.
18. The confocal scanning microscope as defined in Claim 17, further comprising a further spectral filter that allows only light of the wavelengths of the detection spectral region to arrive at the detector.
19. The confocal scanning microscope as defined in Claim 18, wherein the further spectral filter is inverse with respect to the spectral filter.